Nitronex Power Transistors For Broadband

Nitronex of Raleigh, NC, USA has released for production the first two in a series of parts from its broadband product line of RF power transistors, available from late November.

NPTB00025 and NPTB00050 are suited for applications requiring high power and broad bandwidth, such as public safety radio networks, medical instrumentation and military systems.

Nitronex is committed to the RF power market and in the coming months will unveil higher-power versions of these parts, including devices developed in Gemini packages.

Web: www.nitronex.com

Mitsubishi WiMAX Transistor Trio

Mitsubishi Electric Corporation has developed three internally impedance-matched, high output power GaAs FETs for 2.5 GHz and 3.5 GHz band WiMAX base transceiver stations.

The devices operate at low electric current, and have low adjacent channel leakage power. Due to its low energy consumption, reducing the size of the power supply circuit and number of components can reduce the mechanical size of the new transceiver power amplifiers in WiMAX base transceiver stations.

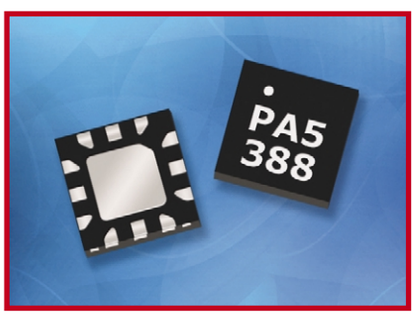
This, plus the simplification of the heat-sink design, leads to low installation and operating costs of base transceiver stations. MEC uses the same metal-ceramic package as previous models with the same dimensions, allowing easy replacement of existing amplifiers. It plans to develop 5 GHz band devices by December 2007.

Web: www.mitsubishielectric.com

TriQuint MMIC for Class 1 Bluetooth

TriQuint Semiconductor introduced an InGaP HBT Bluetooth power amplifier at Electronica. Sampling now, it enables designers to achieve high efficiency and low power EDR v2.0 Class 1 operation while offering 50% PAE for longer mobile device battery life.

"Class 1 Bluetooth systems allow up to 100 m ranges and provide for high data rates. Class 1 Bluetooth is ideal for handsets and use in non-handset devices that make up approximately 45% of the projected market," said Berry Leonard, TriQuint Product Marketing Manager. This new amplifier is ideally suited for longer-range Class 1 designs that are increasingly being targeted by manufacturers of Bluetooth-enabled products."



Currently there are no SiGe equivalents to this part since it is designed for Class 1 operation. Current generations of Class 2 and Class 3 chipsets incorporate signal amplification in the silicon because of the limited range and limited data throughput. An external PA is not needed. TriQuint and other manufacturers build GaAs PAs for Class 1 operation since GaAs amplifiers are more robust and can be made much smaller than silicon.

"The performance of our PA is comparable to competing products. However, what sets our PA apart is the fact it's the only one – the first, in fact – to meet the spec for v2 Class 1 EDR throughput at 2- and 3-Mbps operation. In this regard – we have it, and other amps don't meet the spec with present generation products.".

Web: www.triquint.com